

FIG. 1A

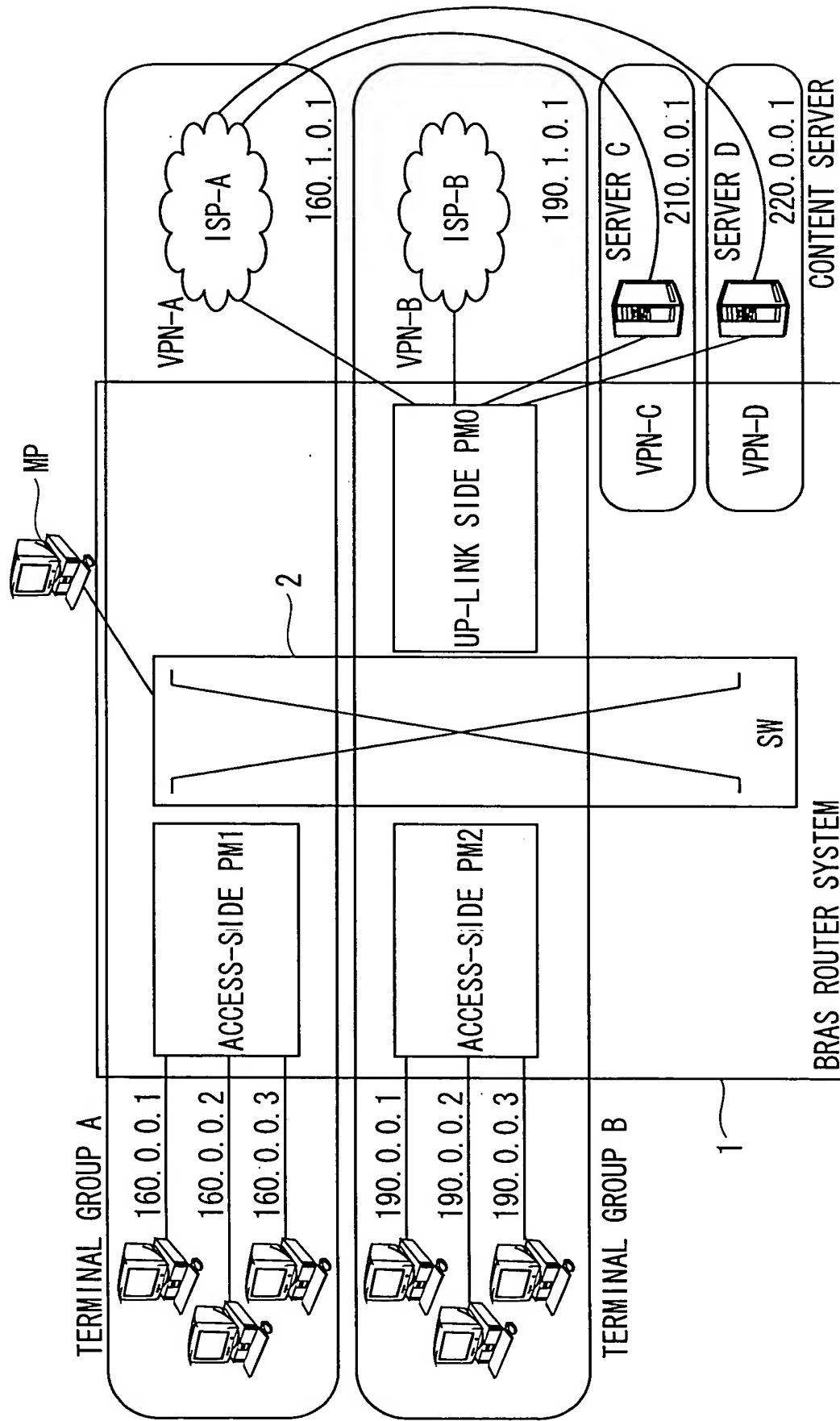


FIG. 1B

ROUTING ENTRY (FOR TERMINAL)

CAM ENTRY INFORMATION		SRAM ASSOCIATIVE DATA INFORMATION		
VPN	ADDRESS	BLADE NUMBER	PORT	TRANSMITTING-SIDE VPN
A	160.0.0.1	SWB1	1	A
A	160.0.0.2	SWB1	1	A
A	160.0.0.3	SWB1	1	A
B	160.0.0.1	SWB1	1	A
B	160.0.0.2	SWB1	1	A
B	160.0.0.3	SWB1	1	A
C	160.0.0.1	SWB1	1	A
C	160.0.0.2	SWB1	1	A
C	160.0.0.3	SWB1	1	A
D	160.0.0.1	SWB1	1	A
D	160.0.0.2	SWB1	1	A
D	160.0.0.3	SWB1	1	A
A	190.0.0.1	SWB2	1	B
A	190.0.0.2	SWB2	1	B
A	190.0.0.3	SWB2	1	B
B	190.0.0.1	SWB2	1	B
B	190.0.0.2	SWB2	1	B
B	190.0.0.3	SWB2	1	B
C	190.0.0.1	SWB2	1	B
C	190.0.0.2	SWB2	1	B
C	190.0.0.3	SWB2	1	B
D	190.0.0.1	SWB2	1	B
D	190.0.0.2	SWB2	1	B
D	190.0.0.3	SWB2	1	B

ROUTING ENTRIES (NETWORK ADDRESS)

CAM ENTRY INFORMATION		SRAM ASSOCIATIVE DATA INFORMATION		REMARKS	
VPN	ADDRESS	BLADE NUMBER	PORT		
			TRANSMITTING -SIDE VPN		
A	160.0.0.0	SWB1	1	A	ISP. A→ TERMINAL GROUP A
C	160.0.0.0	SWB1	1	A	SERVER C→ TERMINAL GROUP A
D	160.0.0.0	SWB1	1	A	SERVER D→ TERMINAL GROUP A
B	190.0.0.0	SWB2	1	B	ISP. B→ TERMINAL GROUP B
C	190.0.0.0	SWB2	1	B	SERVER C→ TERMINAL GROUP B
D	190.0.0.0	SWB2	1	B	SERVER D→ TERMINAL GROUP B
A	160.1.0.0	SWB0	1	A	TERMINAL GROUP A→ ISP. A
B	190.1.0.0	SWB0	2	B	TERMINAL GROUP B→ ISP. B
A	210.0.0.0	SWB0	3	C	TERMINAL GROUP A→ SERVER C
B	210.0.0.0	SWB0	3	C	TERMINAL GROUP B→ SERVER C
C	210.0.0.0	SWB0	3	C	TERMINAL GROUPS A, B→SERVER C
A	220.0.0.0	SWB0	4	D	TERMINAL GROUP A→ SERVER D
B	220.0.0.0	SWB0	4	D	TERMINAL GROUP B→ SERVER D
D	220.0.0.0	SWB0	4	D	TERMINAL GROUPS A, B→SERVER D

FIG. 2

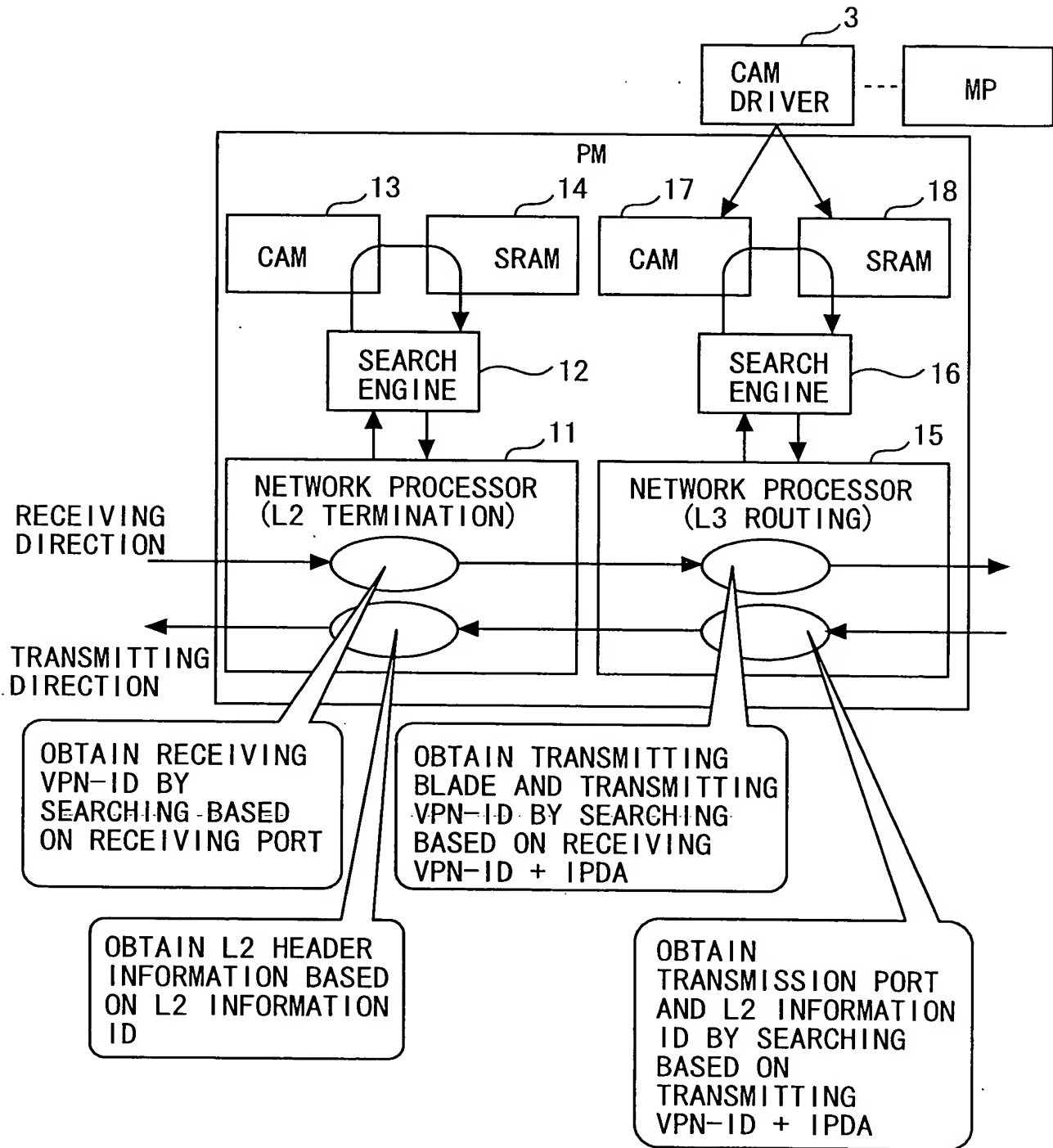


FIG. 3A

13: CAM		14: SRAM	
RECEIPT PORT	L2 HEADER INFORMATION ID	SRAM ADDRESS	RECEIVING-SIDE VPN-ID
			L2 HEADER INFORMATION

FIG. 3B

CAM DEVICE (ROUTING TABLE)				17: CAM		18: SRAM	
(RECEIVING-SIDE OR TRANSMITTING-SIDE) VPN-ID	IP DA	SRAM ADDRESS	TRANSMITTING -SIDE PM	TRANSMISSION PORT	TRANSMITTING -SIDE VPN-ID	L2 HEADER INFORMATION ID	

FIG. 4

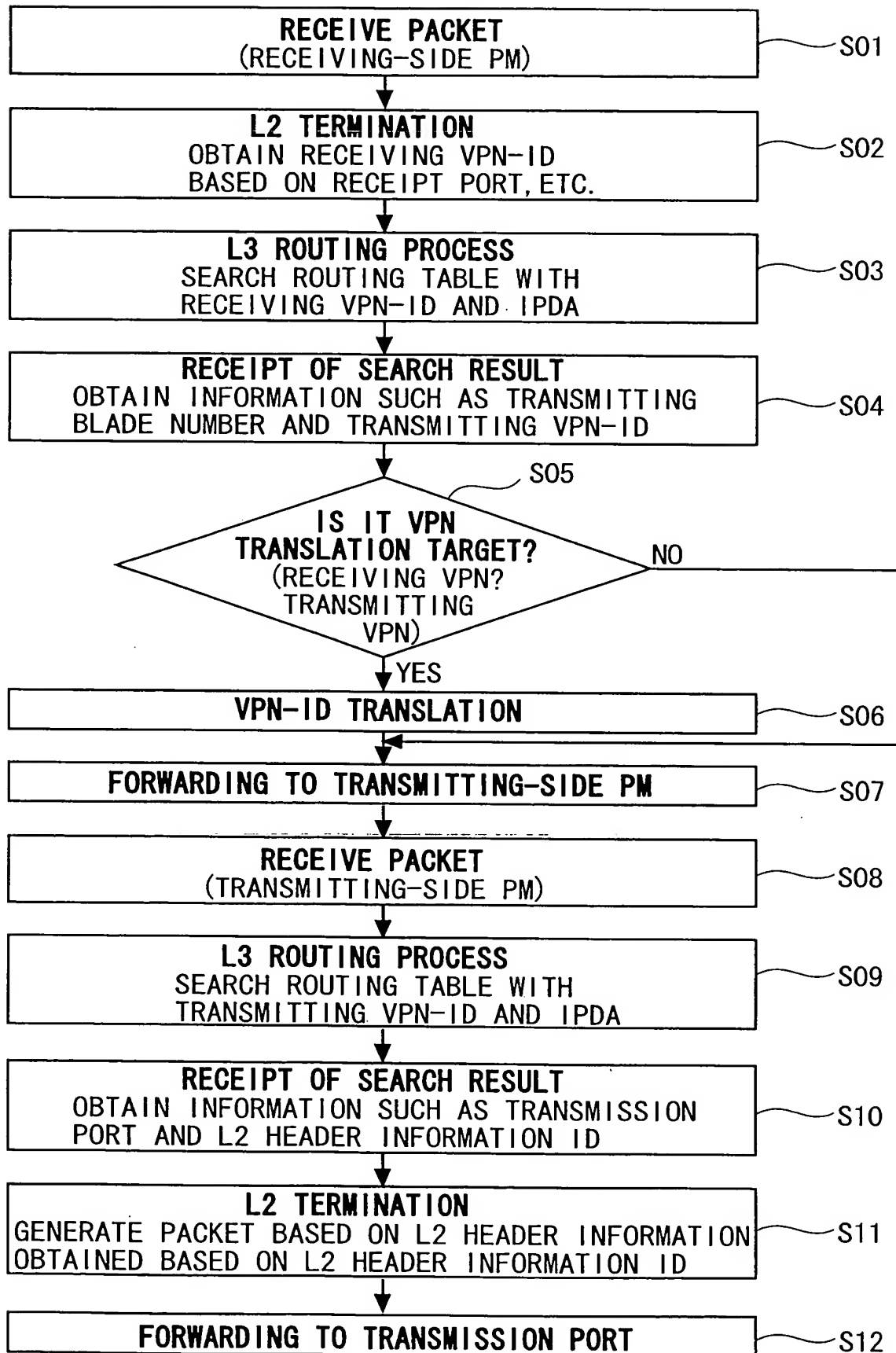


FIG. 5

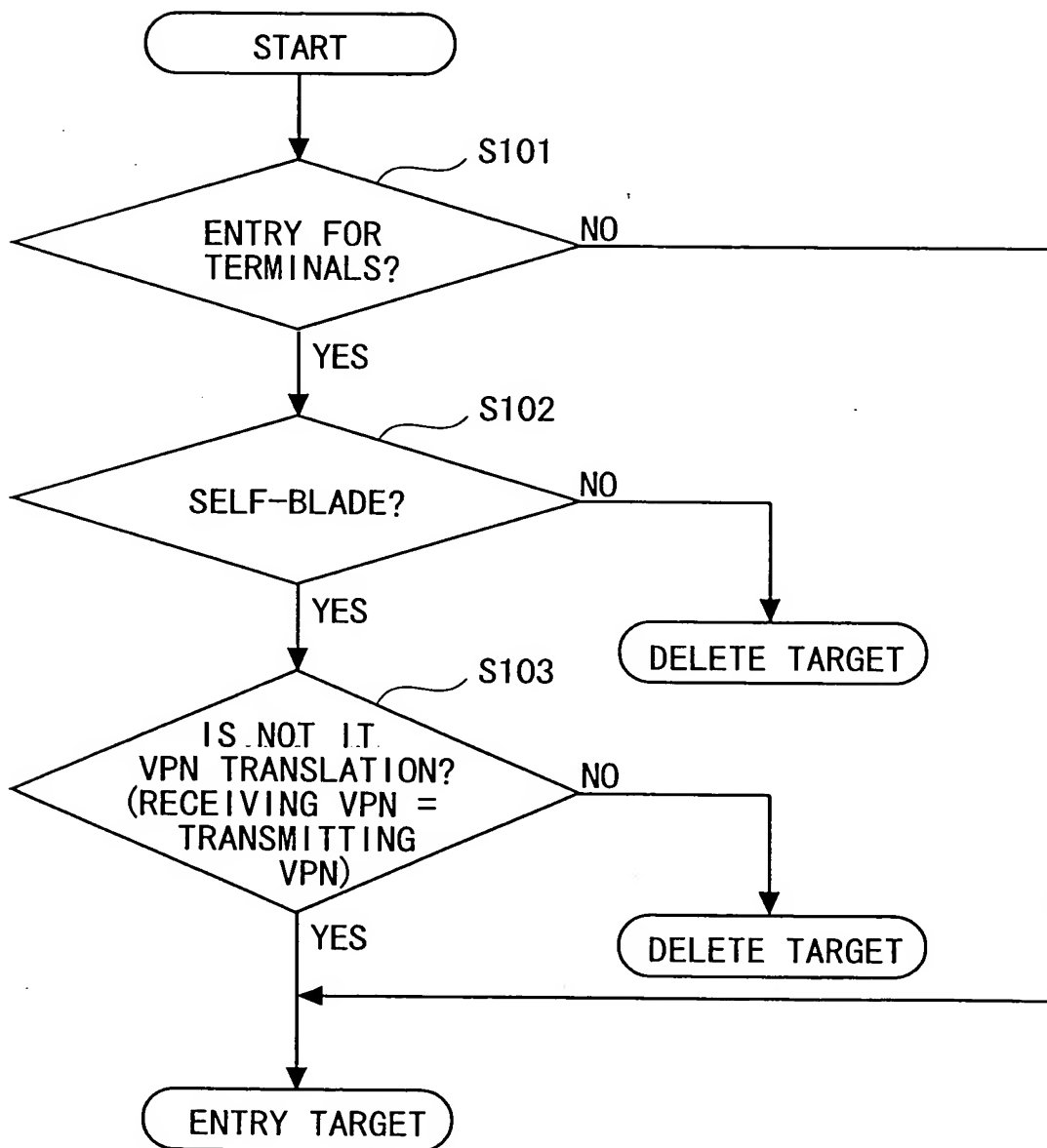


FIG. 6A

ROUTING ENTERIES (FOR TERMINAL)

CAM ENTRY INFORMATION		SRAM ASSOCIATIVE DATA INFORMATION		
VPN	ADDRESS	BLADE NUMBER	PORT	TRANSMITTING-SIDE VPN
A	160.0.0.1	SWB1	1	A
A	160.0.0.2	SWB1	1	A
A	160.0.0.3	SWB1	1	A
B	160.0.0.1	SWB1	1	A
B	160.0.0.2	SWB1	1	A
B	160.0.0.3	SWB1	1	A
C	160.0.0.1	SWB1	1	A
C	160.0.0.2	SWB1	1	A
C	160.0.0.3	SWB1	1	A
D	160.0.0.1	SWB1	1	A
D	160.0.0.2	SWB1	1	A
D	160.0.0.3	SWB1	1	A
A	190.0.0.1	SWB2	1	B
A	190.0.0.2	SWB2	1	B
A	190.0.0.3	SWB2	1	B
B	190.0.0.1	SWB2	1	B
B	190.0.0.2	SWB2	1	B
B	190.0.0.3	SWB2	1	B
C	190.0.0.1	SWB2	1	B
C	190.0.0.2	SWB2	1	B
C	190.0.0.3	SWB2	1	B
D	190.0.0.1	SWB2	1	B
D	190.0.0.2	SWB2	1	B
D	190.0.0.3	SWB2	1	B

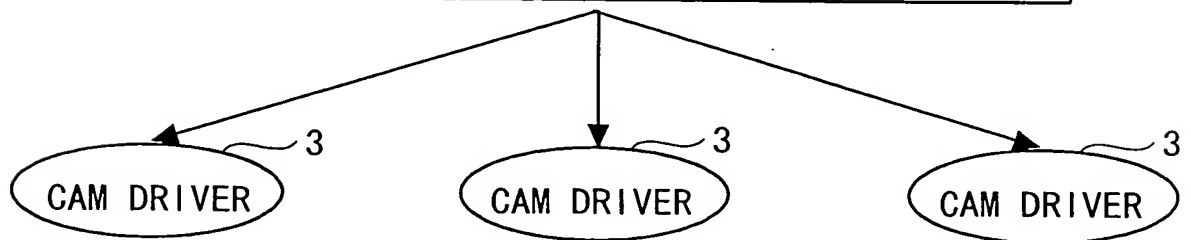


FIG. 6B

EACH CAM DRIVER DELETES ENTRIES OF SELF-BLADE NUMBER AND RECEIVING-SIDE VPN-ID ? TRANSMITTING-SIDE VPN-ID, OTHER THAN SELF-BLADE

ROUTING ENTRY (FOR TERMINAL) ³ CAM DRIVER				ROUTING ENTRY (FOR TERMINAL) ³ CAM DRIVER				ROUTING ENTRY (FOR TERMINAL) ³ CAM DRIVER			
CAM ENTRY INFORMATION	SRAM ASSOCIATIVE DATA INFORMATION	VPN ADDRESS	BLADE NUMBER	PORT	TRANSMITTING-SIDE VPN	CAM ENTRY INFORMATION	SRAM ASSOCIATIVE DATA INFORMATION	VPN ADDRESS	BLADE NUMBER	PORT	TRANSMITTING-SIDE VPN
A: 160.0.0.1	SWB1	1	A			A: 160.0.0.1	SWB1	1	A		
A: 160.0.0.2	SWB1	1	A			A: 160.0.0.2	SWB1	1	A		
A: 160.0.0.3	SWB1	1	A			A: 160.0.0.3	SWB1	1	A		
B: 160.0.0.1	SWB1	1	A			B: 160.0.0.1	SWB1	1	A		
B: 160.0.0.2	SWB1	1	A			B: 160.0.0.2	SWB1	1	A		
B: 160.0.0.3	SWB1	1	A			B: 160.0.0.3	SWB1	1	A		
C: 160.0.0.1	SWB1	1	A			C: 160.0.0.1	SWB1	1	A		
C: 160.0.0.2	SWB1	1	A			C: 160.0.0.2	SWB1	1	A		
C: 160.0.0.3	SWB1	1	A			C: 160.0.0.3	SWB1	1	A		
D: 160.0.0.1	SWB1	1	A			D: 160.0.0.1	SWB1	1	A		
D: 160.0.0.2	SWB1	1	A			D: 160.0.0.2	SWB1	1	A		
D: 160.0.0.3	SWB1	1	A			D: 160.0.0.3	SWB1	1	A		
A: 190.0.0.1	SWB2	1	B			A: 190.0.0.1	SWB2	1	B		
A: 190.0.0.2	SWB2	1	B			A: 190.0.0.2	SWB2	1	B		
A: 190.0.0.3	SWB2	1	B			A: 190.0.0.3	SWB2	1	B		
B: 190.0.0.1	SWB2	1	B			B: 190.0.0.1	SWB2	1	B		
B: 190.0.0.2	SWB2	1	B			B: 190.0.0.2	SWB2	1	B		
B: 190.0.0.3	SWB2	1	B			B: 190.0.0.3	SWB2	1	B		
C: 190.0.0.1	SWB2	1	B			C: 190.0.0.1	SWB2	1	B		
C: 190.0.0.2	SWB2	1	B			C: 190.0.0.2	SWB2	1	B		
C: 190.0.0.3	SWB2	1	B			C: 190.0.0.3	SWB2	1	B		
D: 190.0.0.1	SWB2	1	B			D: 190.0.0.1	SWB2	1	B		
D: 190.0.0.2	SWB2	1	B			D: 190.0.0.2	SWB2	1	B		
D: 190.0.0.3	SWB2	1	B			D: 190.0.0.3	SWB2	1	B		

FIG. 7A

PRIOR ART

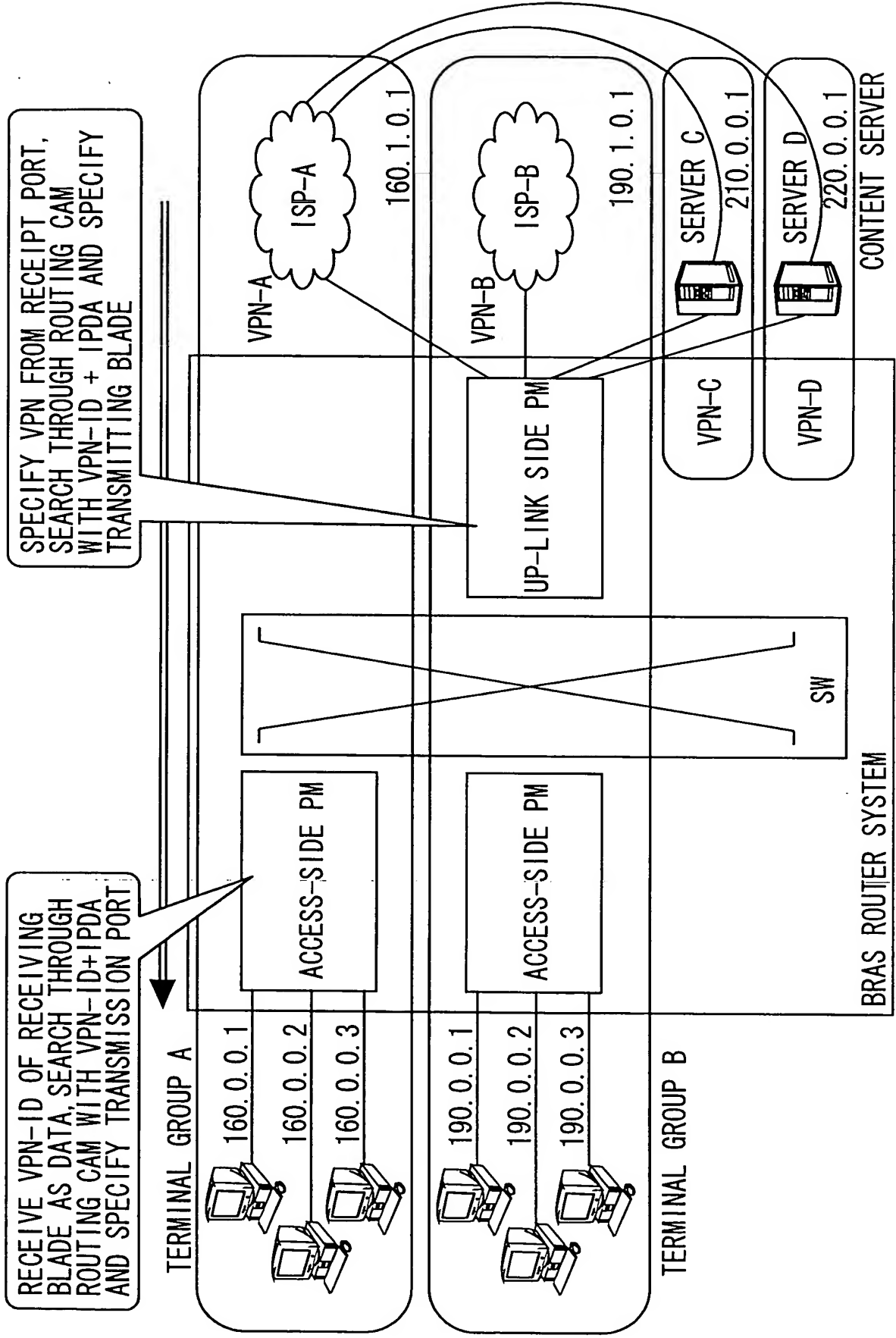


FIG. 7B

PRIOR ART

ROUTING ENTRIES (NETWORK ADDRESS)

VPN	ADDRESS	PREFIX	REMARKS
A	160.0.0.0	24	ISP.A → TERMINAL GROUP A
C	160.0.0.0	24	SERVER C → TERMINAL GROUP A
D	160.0.0.0	24	SERVER D → TERMINAL GROUP A
B	190.0.0.0	24	ISP.B → TERMINAL GROUP B
C	190.0.0.0	24	SERVER C → TERMINAL GROUP B
D	190.0.0.0	24	SERVER D → TERMINAL GROUP B
A	160.1.0.0	24	TERMINAL GROUP A → ISP.A
B	190.1.0.0	24	TERMINAL GROUP B → ISP.B
A	210.0.0.0	24	TERMINAL GROUP A → SERVER C
B	210.0.0.0	24	TERMINAL GROUP B → SERVER C
C	210.0.0.0	24	TERMINAL GROUPS A, B → SERVER C
A	220.0.0.0	24	TERMINAL GROUP A → SERVER D
B	220.0.0.0	24	TERMINAL GROUP B → SERVER D
D	220.0.0.0	24	TERMINAL GROUPS A, B? SERVER D

MULTIPLICITY OF OVERLAPPED
ENTRIES FOR TERMINALS

FIG. 7C

PRIOR ART

ROUTING ENTRY (FOR TERMINAL)

VPN	ADDRESS	PREFIX	REMARKS
A	160.0.0.1	32	
A	160.0.0.2	32	
A	160.0.0.3	32	
B	160.0.0.1	32	OVERLAPPED SETTING
B	160.0.0.2	32	OVERLAPPED SETTING
B	160.0.0.3	32	OVERLAPPED SETTING
C	160.0.0.1	32	OVERLAPPED SETTING
C	160.0.0.2	32	OVERLAPPED SETTING
C	160.0.0.3	32	OVERLAPPED SETTING
D	160.0.0.1	32	OVERLAPPED SETTING
D	160.0.0.2	32	OVERLAPPED SETTING
D	160.0.0.3	32	OVERLAPPED SETTING
A	190.0.0.1	32	OVERLAPPED SETTING
A	190.0.0.2	32	OVERLAPPED SETTING
A	190.0.0.3	32	OVERLAPPED SETTING
B	190.0.0.1	32	
B	190.0.0.2	32	
B	190.0.0.3	32	
C	190.0.0.1	32	OVERLAPPED SETTING
C	190.0.0.2	32	OVERLAPPED SETTING
C	190.0.0.3	32	OVERLAPPED SETTING
D	190.0.0.1	32	OVERLAPPED SETTING
D	190.0.0.2	32	OVERLAPPED SETTING
D	190.0.0.3	32	OVERLAPPED SETTING